

Perception of American English pure vowels by monolingual and bilingual Iranians

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We present preliminary results of a study on the perceptual representation of the vowel system of (American) English of monolingual learners with Persian and bilingual learners with Persian and Azeri (a Turkic language) as their mother tongue(s). Such perception studies may be used to predict and explain specific problems in the pronunciation of the target language. The first experiment explores the mapping of the 11 English vowels onto the 6 Persian) or 9 Azeri vowels of the learners within the perceptual assimilation framework (PAM). The second experiment maps out the mental conception of the English vowels in terms of vowel quality and duration (and the possible interaction between the two) of the two learner groups. For this second experiment we developed a set of 43 reference vowel sounds synthesized in a /m_f/ context at perceptually equal distances of 1 Bark along the height (F1, 7 steps) and backness/roundness (F2, 9 steps) dimensions (excluding 20 impossible combinations) synthesized with 100 and 200-ms steady-state durations. The same 20 monolingual and 20 bilingual Iranian learners of English participated in both experiments. We test the hypotheses that (i) the bilinguals will have more narrowly defined English vowels while (ii) both groups will fail to exhibit the vowel quality-by-duration interaction that is characteristic of native English listeners.